

Appln. No.: 09/993,656
Request for Reconsideration dated Oct. 19, 2005
Reply to Office Action of August 19, 2005

REMARKS/ARGUMENTS

The final Office Action of August 19, 2005 has been carefully reviewed and these remarks are responsive thereto. Claims 1-46 remain pending. Reconsideration and allowance of the instant application are respectfully requested.

Rejections Under 35 U.S.C. § 103

Claims 1-5, 7, and 29-31 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Martino, II (U.S. Pat. No. 5,680,551, hereinafter Martino). This rejection is respectfully traversed for the following reasons.

Independent claim 1 recites, *inter alia*, “wherein each message is routed based on an arbitrary portion of the message’s contents; and an interface through which application programs communicate with the message dispatcher to define the arbitrary portion of the message’s contents.” Martino, however, does not teach or suggest the routing of messages based on an arbitrary portion of the message’s contents, nor does Martino teach or suggest an interface through which application programs communicate with the message dispatcher to define the arbitrary portion of the message’s contents.

Martino discloses a system and method of electronically messaging between computers residing in a variety of computer platforms and communications transport facilities. Col. 3, line 65 – Col. 4, line 19. More specifically, Martino’s electronic messaging system (EMS) encapsulates messages into message packets and stores them in a data buffer called an Interface Control Block (ICB) prior to transmission. However, nowhere does Martino teach or suggest a method whereby a “message is routed based on an arbitrary portion of the message’s contents.” Contrary to the Office Action’s assertions, Martino teaches using several specific fields (i.e., Message ID, Message Tag, Application and Destination/Source ID) in the network portion of the electronic message header (EMH) to match the acknowledgment to the original outgoing message. Col. 17, lines 1-9. As such, the message is not routed based on an *arbitrary* portion of the message’s contents but rather according to pre-specified fields of the EMH. Additionally, Martino discloses that the EMH is constructed and completed by the underlying EMS. Col. 10, lines 25-37. As such, routing under

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Martino is based on an EMS constructed EMH rather than an application program defined arbitrary portion of the message contents. For at least the above reasons, claim 1 is allowable.

In addition, Martino does not teach or suggest an "interface through which application programs communicate with the message dispatcher to define the arbitrary portion of the message's content." At most, Martino discloses an EMS router receiving a commit from the next hop destination, updating the status of the next message in the QEB for the message segment, and determining if the original message is now complete. Col. 18, lines 20-24. In contrast, claim 1 recites an "interface through which application programs communicate with the message dispatcher to *define the arbitrary portion of the message's content.*" (emphasis added). According to the Office Action's assertions at page 11, paragraph 45, Martino's API commit is an interface and the next hop destination is an application program. Even assuming, without admitting, that such a comparison is valid, the Office Action still fails to proffer any evidence that Martino teaches or suggests an application program *defining an arbitrary portion of a message's content.* The next hop destination merely sends a commit message to the EMS Router to confirm receipt of the message or message segment. Col. 18, lines 20-27. Claim 1 is thus allowable for these additional reasons.

Claims 2-5 and 7 are dependent on claim 1 and are thus allowable for at least the same reasons as claim 1. Additionally, the Office Action does not address all the features of the claims 2-5 and 7 and thus fails to establish a *prima facie* case of obviousness.

For example, with respect to claim 3, the Office Action does not establish a *prima facie* case of obviousness because the Office Action does not address all recitations of the claim. While the Office Action alleges that Martino teaches first/second network messages, first/second attribute of said first/second message, and a first/second network, the Office Action does not identify any reference that teaches or suggests *routing* a first network message based on a first attribute of said first network message, and *routing* a second network message based on a second attribute, different from said first attribute, of said second network message, as recited in claim 3 (emphasis added).

With respect to claim 4, the Office Action does not establish a *prima facie* case of obviousness because the Office Action does not address all recitations of the claim. While the Office Action again alleges that Martino teaches first/second network messages, first/second

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attribute of said first/second message, a first/second network, the Office Action fails to address the recitation wherein the message dispatcher *routes* a first network message, addressed to a recipient from a first sender, to a first server, and wherein the message dispatcher *routes* a second network message, addressed to the recipient from a second sender, to a second server, as recited in claim 4.

With respect to claim 7, Martino does not teach or suggest that the arbitrary portion of the message's contents (by which the message is routed, as per base claim 1) is an application level header. Indeed, at col. 8, lines 17-20, Martino describes a network layer header. At col. 9, lines 20-25, Martino describes inserting application level data into a network layer header, and then routing based on the network layer header. At col. 10, lines 28-31, Martino merely describes encapsulation, not routing a message based on an application header in the message's contents.

Independent claim 29 describes, *inter alia*, "storing routing information received from a network application, wherein the routing information comprises a message field, a field condition, and a routing instruction; ... and when the received message's message field meets the field condition, performing the routing instruction." Martino, however, does not receive routing information from a network application, i.e., from an application sending and receiving communications across a network. At most, Martino discloses a destination application generating an acknowledgement message confirming receipt by the receiving user. Col. 16, lines 26-30. Even so, a confirmation message is not equivalent to the claimed routing information. A confirmation message is only generated upon receipt of the message, i.e., after the message has already been routed. Claim 29 is thus allowable for at least this reason.

Claims 30 and 31 depends on claim 29 and is thus allowable for at least the same reasons as claim 29 and further in view of the novel and non-obvious features recited therein.

Claims 6, 8-28 and 32-33 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Martino in view of Narisi *et al.* (U.S. Pat. No. 6,233,619 B1, hereinafter Narisi). This rejection is respectfully traversed for the following reasons.

As to all of claims 6, 8-28 and 32-42, Applicant respectfully submits that there is no motivation or suggestion to combine Martino and Narisi. The Office Action asserts at page 5,

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paragraph 14 that the motivation would be to improve the flexibility of Martino and Narisi's systems by providing an interface which is independent of a communication protocol and a virtual transport layer such as TCP/IP. While Martino and Narisi both pertain to communication between heterogeneous computer systems, Narisi explicitly teaches away from Martino. Significantly, *Narisi is for use with non-TCP/IP systems*. In fact, Narisi explicitly states, at col. 7, lines 36-46, that the system of Narisi is directed to methods and system for use between two directly interconnected computer systems to communicate over the interconnection "*rather than over conventional network communication paths such as TCP/IP and Ethernet.*" (emphasis added). Martino, on the other hand, describes a system for use with the TCP/IP protocol stack. Martino, col. 3, lines 15-21. As such, Narisi teaches away from a combination with Martino and directly contradicts the alleged motivation suggested by the Office Action. Thus, the combination of Narisi and Martino is improper.

In addition to the above, dependent claim 6 is allowable for at least the same reasons as base claim 1 as well as based on the additional novel and non-obvious features recited therein.

Independent claim 8 recites, *inter alia*, a data processing apparatus comprising "stored rules instructing the message dispatcher to route a first network message based on a first arbitrary attribute of said first network message, and route a second network message based on a second arbitrary attribute, different from said first arbitrary attribute, of said second network message, wherein the first and second arbitrary attributes are selected from a set of headers and data contained in each network message." As with independent claim 1, Martino does not teach or suggest the routing of messages based on arbitrary message contents. Even if Narisi could be properly combined with Martino, Narisi fails to cure this deficiency.

Dependent claims 9-16 are allowable for at least the same reasons as base independent claim 8 and further in view of the novel and non-obvious features recited therein. For example, with respect to claim 10, neither Martino nor Narisi teach or suggest that a stored rule is stored in a message handler. Martino, at col. 7, lines 47-58, discloses a Configuration Manager (CFM) that accesses configuration files to determine a service and communication agent to use for delivery of messages. The Office Action at page 5, paragraph 15, asserts that the configuration files are equivalent to rules. Even assuming, without admitting, such an equivalency, nowhere does

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Martino teach or suggest that the CFM is a message handler or that the configuration files are stored in the message handler. As such, claim 10 is allowable for this additional reason.

Neither Martino nor Narisi teach or suggest the features of claim 11. Martino, at col. 9, lines 10-14, discloses building an outgoing message through obtaining memory allocation and setting message control defaults. However, nowhere does Martino or Narisi teach or suggest that a first message handler, upon the occurrence of a predetermined condition, *sends an alteration message* to alter a second message handler. At best, Martino discloses altering message control data defaults which are a component of the message packet. Col. 9, lines 18-25. Altering message control defaults that are a part of the message packet is wholly dissimilar from altering message handlers that process the aforesaid packets (i.e., forwarding). Claim 11 is thus allowable for this additional reason.

Independent claim 17 recites, *inter alia*, "the first and second attributes [on which routing is based] are arbitrarily selected from a set of headers and data of each network message." However, Martino describes routing messages based on only specific fields, i.e., ultimate destination or class of service. Col. 17, lines 1-9. As such, Martino's method of routing a network message is not based on arbitrary selections from a set of headers and data of each network message. Claim 17 is thus allowable for at least this reason.

Dependent claims 18-28 are allowable at least for similar reasons as claim 17 and further in view of the novel and non-obvious features recited therein.

Independent claim 32 recites, *inter alia*, a computer network comprising a plurality of computers, each computer having "a message dispatcher that routes and dispatches messages based on an arbitrary portion of the message's contents." As discussed above, Martino does not teach or suggest routing based on an *arbitrary portion* of the message's contents, and Martino and Narisi can not be properly combined. Claim 32 is thus allowable for at least this reason.

Dependent claim 33 is allowable at least for the same reasons as claim 32, as well as based on the additional novel and non-obvious features recited therein.

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Claims 34-42 and 46 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Sheard *et al.* (U.S. Patent No. 6,453,356, hereinafter Sheard) in view of Narisi. This rejection is respectfully traversed for the following reasons.

Independent claim 34 recites, *inter alia*, “at least one virtualized component inserted between layer 7 and layer 6 of an OSI protocol stack, wherein said virtualized component provides a virtual network service.” Neither Sheard nor Narisi teaches or suggests the insertion of a virtual network component between an application layer (layer 7) and a presentation layer (layer 6). The Office Action at page 7, paragraph 35, concedes that Sheard does not teach OSI protocol stacks, much less the insertion of a virtual network component between layer 7 and layer 6. Narisi similarly does not teach or suggest such a feature. While Narisi mentions conventional ISO network protocol stacks at col. 13, lines 13-20, Narisi lacks any teaching or suggestion of inserting a virtual network component between layer 7 and layer 6. In fact, Narisi teaches away from using OSI protocol stacks, stating that “in accordance with the invention, the NT Server further includes a Virtual Transport Layer (“VTL”) and Messaging SubSystem (“MSS”) which allow the NT Server to *bypass the conventional ISO network protocol stack* for communications.” (emphasis added). Claim 34 is thus allowable for at least this reason.

Claims 35-42 are dependent on claim 34 and are thus allowable for at least the same reasons as claim 34 and further in view of the novel and non-obvious features recited therein.

Independent claim 46 recites, *inter alia*, “an interface through which OSI layer 7 application programs communicate with the message dispatcher to define the arbitrary portion of the message’s contents by which each message is handled.” As discussed previously with respect to claim 1, Narisi does not teach or suggest such a feature. Sheard fails to cure the deficiencies of Narisi. The Office Action alleges at page 9, paragraph 38 that Sheard discloses a data exchange engine that cooperates with a routing logic module to determine appropriate application program destinations based on requested data streams. Even assuming, without admitting, the validity of the allegation, Sheard still does not teach or suggest an interface through which application programs communicate with the message dispatcher to define the arbitrary portion of the message’s contents by which each message is handled. Sheard describes reformatting a data stream or portion thereof requested by an application. Col. 9, lines 1-10. In

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other words, a requesting application specifies the message that it would like to receive (i.e., whether the application wants the entire data stream or a portion of the data stream). As such, Sheard fails to teach or suggest application programs communicating with a message dispatcher to define an arbitrary portion *of the message's contents* by which the message is handled. Claim 46 is thus allowable for at least this reason.

Claim 43 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Martino in view of Narisi and further in view of Sheard. This rejection is respectfully traversed for the following reasons.

As discussed above, there is no motivation to combine Martino and Narisi. In fact, Narisi teaches away from the TCP/IP network architecture utilized in Martino. *See supra*. As such, the combination of Martino and Narisi suggested by the Office Action is wholly improper.

Even assuming, without admitting, the combination were proper, Sheard fails to cure the deficiencies of Martino and Narisi with respect to claim 43. Claim 43 recites, *inter alia*, "adding a new message handler to route messages based on a newly created type of message header." Sheard does not teach or suggest such a feature. Sheard, at col. 9, lines 28-32 and 38-45, discloses a plurality of dialogs (a transfer medium) created for a plurality of pairs of first and second applications. According to Sheard, such a method allows transparent communication between a first and second application. Col. 9, ll. 31-37. However, Sheard lacks any teaching of a new message handler to route messages *based on a newly created type of message header*. At best, Sheard creates new dialogs based on new pairs of applications. Claim 43 is thus allowable for at least this reason.

Claims 44 and 45 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Martino in view of Narisi and further in view of Holmes (U.S. Patent No. 5,935,219). This rejection is respectfully traversed for the following reasons.

As discussed previously, the combination of Martino and Narisi is improper and the motivation suggested by the Office Action runs contrary to the teachings of Martino and Narisi. Even if the combination were proper, Holmes fails to cure the deficiencies of such a combination

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discussed with respect to base independent claim 17. Nowhere does Holmes teach or even suggest a first and second attribute arbitrarily selected from a set of headers and data of each network message. As such, claims 44 and 45 are allowable for at least this reason.

CONCLUSION

All rejections having been addressed, applicant respectfully submits that the instant application is in condition for allowance, and respectfully solicits prompt notification of the same. However, if for any reason the Examiner believes the application is not in condition for allowance or there are any questions, the examiner is requested to contact the undersigned at (202) 824-3153.

Respectfully submitted,

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